# FEB/FY06

# LONE STAR ARMY AMMUNITION PLANT

Texas

Base Realignment & Closure Installation Action Plan

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# Statement of Purpose

The purpose of the Base Realignment and Closure (BRAC) Installation Action Plan (BIAP) is to outline the total multi-year Cleanup Program for an installation. The plan identifies environmental cleanup requirements at each site or area of concern, and proposes a comprehensive, installation-wide approach, with associated costs and schedules, to conduct investigations and necessary remedial actions.

In an effort to coordinate planning information between the restoration manager, US Army Environmental Center (USAEC), Lone Star Army Ammunition Plant, BRAC Division, executing agencies and regulatory agencies, an IAP was completed. The IAP is used to track requirements, schedules and tentative budgets for all Army installation cleanup programs.

All site-specific funding and schedule information has been prepared according to projected overall Army funding levels and is, therefore, subject to change.

The following agencies contributed to the formulation and completion of this Installation Action Plan during a planning workshop held on 16 Feb 06:

# Company/Installation/Branch

DA
Engineering & Environment, Inc for USAEC
LSAAP
TCEQ
USACE, Fort Worth District
USAEC
US EPA

# Acronyms & Abbreviations

AAP Army Ammunition Plant

AEDB-R Army Environmental Database - Restoration (formerly DSERTS)

AMC Army Material Command

AOC Area of Concern

APAR Affective Property Assessment Report

BIAP BRAC Installation Action Plan
BRAC Base Re-alignment and Closure

CA Corrective Action

CERCLA Comprehensive Environmental Response, Compensation and Liability Act of

1980

CESWT Corp of Engineers, Fort Worth District

CMI(C) Corrective Measures Implementation (Construction)
CMI(O) Corrective Measures Implementation (Operations)

COC Contaminants of Concern
CS Confirmatory Sampling
CTC Cost to Complete
cy Cubic Yards
DCE Dichloroethylene
DD Decision Document

DERP Defense Environmental Restoration Program

DES Design Phase

DLA Defense Logistics Agency

DSERTS Defense Site Environmental Restoration Tracking System (now AEDB-R)

ER,A Environmental Restoration, Army (formerly DERP)

FS Feasibility Study FY Fiscal Year

GO/CO Government-owned/Contractor-operated

GW Groundwater

GWPS Groundwater Protection Standard
HMX Cyclotetramethylene Tetranitramine

IAG Interagency Agreement
IAP Installation Action Plan
IDW Investigative Derived Waste
IR Installation Restoration
IRA Interim Remedial Action

IRP Installation Restoration Program

K Thousand kg Kilogram

LAP Load, Assemble and Pack

LSAAP Lone Star Army Ammunition Plant

LTC Lieutenant Colonel
LTM Long-term Management

LUC Land Use Control

mg Milligram

MNA Monitored Natural Attenuation

NFA No Further Action

# Acronyms & Abbreviations

NOV Notice of Violation NPL **National Priorities List** ODA Old Demolition Area PA Preliminary Assessment PAH Polyaromatic Hydrocarbons Polychlorinated Biphenyls **PCB** PCL **Protective Concentration Limit PETN** Pentaerythritoltetranitrate

RA Remedial Action

RAB Restoration Advisory Board
RA(C) Remedial Action (Construction)
RACR Remedial Action Completion Report

RA(O) Remedial Action (Operation)

RAP Remedial Action Plan RC Response Complete

RCRA Resource Conservation and Recovery Act

RD Remedial Design

RDX Cyclotrimethylenetrinitramine

REM Removal

RFA RCRA Facility Assessment RFI RCRA Facility Investigation RI Remedial Investigation

RI/FS Remedial Investigation/Feasibility Study

RIP Remedy in Place
ROB Road Oil Burial
ROD Record of Decision
RRAD Red River Army Depot

RRSE Relative Risk Site Evaluation

S&R Supervision & Review

SARA Superfund Amendments and Reauthorization Act

SI Site Inspection

SWMU Solid Waste Management Unit

TAPP Technical Review for Public Participation

TBD To Be Decided TCE Trichloroethylene

TCEQ Texas Commission on Environmental Quality (formerly TNRCC)
TNRCC Texas Natural Resource Conservation Commission (now TCEQ)

TNT Trinitrotoluene

TPH Total Petroleum Hydrocarbons
TRC Technical Review Committee

μg/g Micrograms per Gram μg/L Micrograms per Liter

USAEC United States Army Environmental Center

USACE US Army Corp of Engineers

USATHAMA United States Army Toxic and Hazardous Materials Agency (now USAEC)

USEPA United States Environmental Protection Agency

# Acronyms & Abbreviations

VOC Volatile Organic Compounds VSI Visual Site Inspection

# **Installation Information**

*Installation Locale:* LSAAP is located in northeastern Texas, about 12 miles west of Texarkana, Texas, in central Bowie County. The installation lies in the heart of a four-state area: Arkansas, Oklahoma, Louisiana, and Texas. Communities in the vicinity of LSAAP include Hooks, Victory City, and Leary to the north, and Redwater and Maud to the south and southwest. The installation covers approximately 15,546 acres.

Installation Size: 15,546 acres
Installation Acreage: 15,546 acres
BRAC Acreage: 15,546 acres

Acreage being transferred to other service: NA

Acreage being transferred to other federal agencies: NA

Acreage being transferred to non-federal agencies: 15,546 acres

List of Off Post Properties: None

# **Environmental Condition of Property: TBD**

Acres in Category 1: TBD Acres in Category 2: TBD Acres in Category 3: TBD Acres in Category 4: TBD Acres in Category 5: TBD Acres in Category 6: TBD Acres in Category 7: TBD

# Lead Organization:

**Joint Munitions Command** 

# Lead Executing Agencies:

Investigation Phase: US Army Corps of Engineers, Fort Worth District Remedial Action Phase: US Army Corps of Engineers, Fort Worth District

# Regulator Participation:

**Federal:** US Environmental Protection Agency, Region 6, Federal Facilities Section **State:** Texas Commission on Environmental Quality (TCEQ), Industrial and Hazardous

Waste Division

BRAC Closure Round: BRAC V 2005

# **Installation Information**

Status of Redevelopment Initiative (Reuse Plan): TBD

Organization Name: TBD

Plan Status: TBD

Development Plan Date: TBD

Existing Legal Agreements/Interim Leases: Red River Army Depot, others TBD

Significant Base Tenants: DLA, Red River Railcar Storage, Day & Zimmermann

Technology, American Dehydrated Foods, TEC Linens

Projected Date of Final Transfer of Property: FY07

National Priorities List (NPL) Status: Site LSAAP-017 (17.4 acres), Score 31.85, Jun

1990

Date for Construction Completion: Aug 2002

Projected Date for Deletion from the NPL: 2006

Installation Restoration Advisory Board (RAB)/Technical Review Committee (TRC)/Technical Assistance for Public Participation (TAPP) Status: No RAB/TRC/TAPP currently at LSAAP. The public was last surveyed for interest in 2001.

# Installation Program Summaries IRP

Primary Contaminants of Concern: Explosives, Metals, VOCs

Affected Media of Concern: Soil, Groundwater, Surface Water, Sediment Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 2006

Funding to Date (up to FY05): \$26,215,000 Current Year Funding (FY06): \$546,000 Cost-to-Complete (FY07+): \$7,991,000

Closure-Related Compliance: TBD

Natural and Cultural Resources: TBD

Other Transfer/Environmental Issues: TBD

## No Date

 Rome Research Corporation; Aerial Color Infrared Photography Interpretation, Lone Star Army Ammunition Plant, Texarkana, Texas

# 1968

 U.S. Army Environmental Hygiene Agency (USAEHA); Industrial Wastes Special Study No. 24-11-67/69, November 12-23

# 1971

 Day & Zimmermann, Inc., Salvage Yard Plot Plan, Lone Star Army Ammunition Plant, Texarkana, Texas

# 1972

 U.S. Army Environmental Hygiene Agency (USAEHA), Water Quality Engineering Survey No. 24-029-72/73, Lone Star Army Ammunition Plant, Texarkana, Texas, May 22-26

# 1973

 U.S. Army Environmental Hygiene Agency (USAEHA); Water Quality Monitoring Consultation No 24-015-74, Lone Star Army Ammunition Plant, Texarkana, Texas, September 24-28

# 1974

- U.S. Army Environmental Hygiene Agency (USAEHA); Water Quality Engineering Special Study No. 24-026-75/76, Industrial Wastewater, Lone Star Army Ammunition Plant, Texarkana, Texas, June 3-21
- U.S. Army Environmental Hygiene Agency (USAEHA); Solid Waste Consultation List No. 26-004-75, Lone Star Army Ammunition Plant, Texarkana, Texas, July 25-26

# 1975

- U.S. Army; Environmental Impact Assessment, Plant-Wide Assessment Activities, Lone Star Army Ammunition Plant, Texarkana, Texas
- U.S. Army Armament Command; Environmental Impact Assessment, Lone Star Army Ammunition Plant, Texarkana, Texas, RDS: DD-H&E AR 1068

# 1977

 Day & Zimmermann, Inc.; Land Management Plan, Lone Star Army Ammunition Plant, Texarkana, Texas

# 1978

 U.S. Army Toxic and Hazardous Materials Agency (USATHAMA); Installation Assessment of Lone Star Army Ammunition Plant, Report No. 124

## 1979

- Day & Zimmermann, Inc.; Water Quality Surveillance Program, Lone Star Army Ammunition Plant, Texarkana, Texas
- U.S. Army Environmental Hygiene Agency (USAEHA); Potable/Recreational Water Quality Survey No. 31-62-0148-80 and Wastewater Engineering Survey No. 32-666-0147-80, Lone Star Army Ammunition Plant, Texarkana, TX, October 29 -November 9

# 1980

- CH2M Hill; Red River Army Depot Solid Waste Disposal Study, Texarkana, Texas
- Day & Zimmermann, Inc.; Environmental Assessment, Lone Star Army Ammunition Plant, Texarkana, Texas
- SCS Engineers; Subsurface Investigation of Areas G and O, Lone Star Army Ammunition Plant, Texarkana, Texas

# 1982

 U.S. Army Toxic and Hazardous Materials Agency (USATHAMA); Interim Technical Report #2 Geotechnical Report for Contamination Survey of Lone Star Army Ammunition Plant, Texarkana, Texas, Report DRZTH-AS-CR-82139

# 1983

- Harding Lawson Associates, Industrial Solid Waste Landfill Siting, Lone Star Army Ammunition Plan, Texarkana, Texas
- U.S. Army Environmental Hygiene Agency (USAEHA); Final Technical Report for Contamination Survey of Lone Star Army Ammunition Plant, Texarkana, Texas, Report DRZTH-AS-CR-83226
- U.S. Army Toxic and Hazardous Materials Agency (USATHAMA), Interim Technical Report #3, Contamination Analysis Report for Contamination Survey of Lone Star Army Ammunition Plant, Texarkana, Texas, Report DRXTH-AS-CR-82139

# 1984

- Dames & Moore; Ground-Water Quality Assessment OTC Area, Red River Army Depot, Texarkana, Texas
- Dames & Moore; Ground-Water Quality Assessment WWT Area, Red River Army Depot, Texarkana, Texas

- Environmental Protection Systems, Inc.; Contamination Survey, High Explosives Burning Ground, Lone Star Army Ammunition Plant, Texarkana, Texas
- U.S. Army Environmental Hygiene Agency (USAEHA); Geohydrologic Study No. 38-26-0501-86, Lone Star Army Ammunition Plant, Texarkana, Texas
- U.S. Army Environmental Hygiene Agency (USAEHA); Groundwater Monitoring Study No 38-26-0457-86, AMC Open Burning/Open Detonation Facilities, Lone Star Army Ammunition Plant, Texarkana, Texas

# 1985 (continued)

 U.S. Army Environmental Hygiene Agency (USAEHA); Water Quality Biological Consultation No. 32-24-1307-85, Lone Star Army Ammunition Plant, Texarkana, Texas, 3 May - 26 Jun 1985

# 1986

- Longview Inspection, Inc.; Report of Contamination Survey, Wells/Cisterns Lone Star Army Ammunition Plant (Preliminary), Texarkana, Texas
- U.S. Army Red River Army Depot; Groundwater Monitoring Results for Sanitary Landfill (Present Landfill), Texarkana, Texas

# 1987

- U.S. Army Environmental Hygiene Agency (USAEHA); Groundwater Contamination Migration Study No 38-26-0823-88, Lone Star Army Ammunition Plant, Texarkana, Texas, 11-23 May
- U.S. Army Environmental Hygiene Agency (USAEHA); Geohydrologic Study No. 38-26-0871-88, Lone Star Army Ammunition Plant, Texarkana, Texas, 14-25 Sept
- U.S. Army Environmental Hygiene Agency (USAEHA); Groundwater Contamination Migration Study No 38-26-0870-88, Lone Star Army Ammunition Plant, Texarkana, Texas, 17-31 Aug
- U.S. Army Environmental Hygiene Agency (USAEHA); USGS Aerial Photography-1968, Lone Star Army Ammunition Plant, Texarkana, Texas
- U.S. Army Lone Star Army Ammunition Plant (LSAAP); Water Quality Monitoring Data, project files of Day & Zimmermann

# 1988

- A.T. Kearney; PR/VSI REPORT Lone Star Army Ammunition Plant, Texarkana, Texas, EPA I.D. No. TX7213821381
- Waterways Experiment Station of USATHAMA; Subsurface Conditions at Site 16 lone Star Army Ammunition Plant, Texarkana, Texas

# 1990

- Dames & Moore; Remedial Investigation/Feasibility Study Report, Site 14, the Old Demolition Area for Lone Star Army Ammunition Plant (DRAFT)
- Geo-Marine, Inc.; Intensive Archeological Survey and Archival Investigations at the Red River Army Depot and Lone Star Army Ammunition Plant, Bowie County, Texas

# 1991

- Dames & Moore; Remedial Investigation Report for Lone Star AAP (DRAFT)
- Dames & Moore; Feasibility Study Reports for Lone Star AAP (DRAFT)

# 1993

 Fluor Daniel, Inc; Phase III Remedial Investigation Report, Site 14, Old Demolition Area for Lone Star Army Ammunition Plant (DRAFT-FINAL)

## 1994

- Fluor Daniel, Inc; RCRA Facility Investigation, Lone Star Army Ammunition Plant (DRAFT), Background Constituent Concentration, A Statistical Report
- Fluor Daniel, Inc; RCRA Facility Investigation Lone Star AAP (DRAFT)

# 1996

- AGEISS Environmental; Final Technical Plan Lone Star AAP Old Demolition Area
- AGEISS Environmental; Revised Final Quality Control Plan Lone Star AAP Old Demolition Area
- AGEISS Environmental; Sampling and Analysis Plan Lone Star AAP Old Demolition Area

# 1997

- Parsons Engineering Science; Groundwater Compliance Plan Application for the Western Inactive Landfill
- AGEISS Environmental; Remedial Investigation Report Lone Star AAP Old Demolition Area

# 1998

- AGEISS Environmental; Focused Feasibility Study Lone Star AAP Old Demotion Area
- Trinity Consultants; Site Operating Permit (SOP) Application Lone Star AAP

# 2000

- Malcolm Pirnie; Monitoring Well Abandonment, Installation, and Sampling Report -G Ponds
- Malcolm Pirnie; Monitoring Well Abandonment, Installation, and Sampling Report -O Ponds
- USACE, Fort Worth; Semi-Annual Groundwater Monitoring Report G Pond
- USACE, Fort Worth; Semi-Annual Groundwater Monitoring Report O Pond

- Parsons Engineering Science; Affected Property Assessment Report Eastern Inactive Landfill
- Malcolm Pirnie: Affected Property Assessment Report G Ponds Unit
- Tetra Tech; Draft Final Affected Property Assessment Report RCRA Facility Investigation Unit 20 - RDX/TNT Sumps and Tanks Areas B, E, O, and R
- USACE, Fort Worth; Draft Final Affected Property Assessment Report BB-15 Area
- USACE, Fort Worth; Draft Final Affected Property Assessment Report K-15 North and South
- Parsons Engineering Science; Draft Final Affected Property Assessment Report Western Inactive Landfill
- Malcolm Pirnie; Affected Property Assessment Report Unit 16 High Explosive Burning Ground

# 2001 (continued)

 USACE, Southwestern Division Laboratory; LSAAP K-15 North and South and BB-15 Area Laboratory Data for IDW Removal

# 2002

- Tetra Tech; Corrected Final Affected Property Assessment Report RCRA Facility Investigation Unit 499E - Industrial Sewer Lift Station Area P and Q
- Wendy Lopez & Associates; Draft Affected Property Assessment Report CP-RFI Unit 10 (LSAAP Unit No. 24, Abandoned Construction Landfill Near Area W)
- Tetra Tech; Draft Compliance Plan Renewal Application O Ponds, G Ponds, WISL, Unit 16, Unit 18, and Unit 55
- Parsons Engineering Science; Final Affected Property Assessment Report Area P & Q - Former Pits and Sumps
- LANDTECH Engineers; Final Cover Evaluation Report Old Demolition Area
- PMC Environmental; Final RCRA Facility Investigation Road Oil Burial Site, Landfill Near Area W 2 and Landfill Near Area W 3
- Tetra Tech; Groundwater Monitoring Report G Ponds
- Tetra Tech; Groundwater Monitoring Report O Ponds
- Tetra Tech; Groundwater Monitoring Report (Semi-Annual) G Ponds
- Tetra Tech; Groundwater Monitoring Report (Semi-Annual) O Ponds
- Tetra Tech; Groundwater Monitoring Report (Semi-Annual) Western Inactive Sanitary Landfill
- Tetra Tech; Groundwater Monitoring Report Western Inactive Sanitary Landfill
- Malcolm Pirnie; Response Action Plan G Ponds

- Parsons Engineering Science; Draft Compliance Monitoring Report Western Inactive Sanitary Landfill
- Tetra Tech; Draft Final Affected Property Assessment Report Addendum RCRA Facility Investigation Unit 20 - RDX/TNT Sumps and Tanks Area E-Tanks E-66 and E-69
- USACE, Fort Worth; Draft Final Affected Property Assessment Report Area F
- Geo-Marine, Inc; Draft Final First Quarter Monitoring Report, Old Demolition Area
- Parsons Engineering Science; Draft Final Monitored Natural Attenuation Demonstration Report
- Geo-Marine; Draft Fourth Quarter Monitoring Report Old Demolition Area
- Malcolm Pirnie: Draft Response Action Effectiveness Report G Ponds Unit
- Wendy Lopez & Associates; Final Affected Property Assessment Report unit 9
- Tetra Tech; Groundwater Monitoring Report (Semi-Annual) G Ponds
- Tetra Tech; Groundwater Monitoring Report (Semi-Annual) O Ponds
- Parsons Engineering Science; Groundwater Monitoring Report (Semi-Annual)
   Western Inactive Sanitary Landfill
- Tetra Tech; Groundwater Monitoring Report (Semi-Annual) Western Inactive Sanitary Landfill

# **Previous Studies**

# 2003 (continued)

- Malcolm Pirnie; Response Action Effectiveness Report G Ponds
- Parsons Engineering Science; Semi-Annual Corrective Action Groundwater Monitoring Report - Western Inactive Sanitary Landfill

- Malcolm Pirnie; Draft Revised Affected Property Assessment Report Unit 18 High Explosive Demolition Ground
- Malcolm Pirnie; Draft Revised Affected Property Assessment Report Unit 55 Test Area XX
- Tetra Tech; Groundwater Monitoring Report (Semi-Annual) G Ponds
- Tetra Tech; Groundwater Monitoring Report (Semi-Annual) O Ponds

# Transfer Summary

**Total Installation Acres: 15,546** 

**BRAC Acres**: 15,546

Parcel Name: TBD

Recipient organization: TBD

Acres: TBD

Transfer strategy: TBD Current land use: TBD Future land use: TBD Transfer date: TBD

# Cleanup Program Summary

# Installation Historic Activity:

LSAAP is a government-owned/contractor-operated (GO/CO) facility that has produced a variety of munitions. LSAAP occupies over 15,000 acres of land on which the various functions necessary to load, assemble, and pack (LAP) ammunition items for the Army are performed and maintained. The plant contains an administration area, 13 production load lines, seven storage areas, maintenance shops, a railroad classification yard, a sewage treatment plant, demolition areas, a high explosives burning ground, landfills (active and closed), and a fire-fighting pumping station.

LSAAP is a government-owned shell loading plant constructed during World War II. Construction began in mid-1941 and was completed during the summer of 1942. Immediately following the completion of initial construction, the Lone Star Defense Corporation, a subsidiary of the B.F. Goodrich Company, Akron, Ohio, placed the plant into active production. Goodrich operated the plant during World War II and for several months thereafter in conjunction with closeout procedures. Effective November 4, 1945, Lone Star Ordnance Plant was incorporated with Red River Ordnance Depot, and a few months later the name of the installation was changed to Red River Arsenal. In the early part of 1950, Lone Star was selected for reactivation and Day & Zimmermann, Inc. was selected as the architect and operating engineer. Effective November 1, 1951, the plant was designated Lone Star Ordnance Plant, a Class II industrial activity under the jurisdiction of the Chief of Ordnance. On July 1, 1963, the plant was redesignated Lone Star Army Ammunition Plant. Early in 1969, ammunition production activities began a gradual decline, which has resulted in a decrease in personnel from a peak of 11,463 in December 1968, to the present strength of approximately 400.

The Army is investigating areas at LSAAP for any detrimental environmental impact, by implementing its environmental response authority under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/Superfund Amendments and Reauthorization Act (SARA), and under the Resource Conservation and Recovery Act (RCRA). In July 1987, the Environmental Protection Agency listed the Old Demolition Area (ODA) on the National Priorities List (NPL) based on a score of 31.85 under the Hazard Ranking System. The ODA covers approximately 17.4 acres in the south-central portion of LSAAP. It was used in 1943-1944 for the disposal of various munitions (grenades, fuses, and bombs) by detonation.

# **IRP**

- Prior Year Progress:
  - Complete RI at LSAAP-101 in FY05.
  - o Completed RA at LSAAP-009
  - Complete RAs at LSAAP-016 and 020 in FY05.
- Future Plan of Action:
  - Continue long-term monitoring or RA(O) at LSAAP-002,009, 016, 017, 024, 033, and 034.
  - Finish RA at LSAAP-006.

# LONE STAR ARMY AMMUNITION PLANT BRAC

Parcel and Site Descriptions



# Total AEDB-R IRP Sites/AEDB-R sites with Response Complete: 57/55

# **Different Site Types:**

2	Burn Area	1	Contaminated Groundwater
1	Contaminated Sediments	10	Disposal Pit/Dry Well
1	Drainage Ditch	2	Explosive Ordnance Disposal Area
3	Industrial Discharge	14	Landfill
1	Maintenance Yard	1	Plating Shop
4	Spill Site Area	5	Storage Areas
3	Surface Disposal Areas	3	Surface Impoundment/Lagoon
1	Underground Tank Farm	4	Water Lines
1	Waste Treatment Plant		

Most Widespread Contaminants of Concern: Explosives, Metals, VOCs

Media of Concern: Soil, Groundwater, Surface Water, Sediment

# Completed Removal (REM)/Interim Remedial Action (IRA)/Remedial Action (RA):

1983	IRA:	LSAAP-033 Capping
	IRA:	LSAAP-034 Capping
1989	RA:	LSAAP-029 Waste Removal
1992	RA:	LSAAP-039 Waste Removal
1995	IRA:	LSAAP-006 Soil Removal
1998	RA:	LSAAP-005 Soil Removal
	IRA:	LSAAP-015 Soil Removal
	RA:	LSAAP-045 Waste Removal
	RA:	LSAAP-046, 047, 048, 053, and 05, Soil Removal
	RA:	LSAAP-073 Soil Removal
2001	RA	LSAAP-002 Monitored Natural Attenuation Initiated
2002	RA:	LSAAP-017 Soil Cover
2003	RA:	LSAAP-033 Soil Removal
2004	RA:	LSAAP-020 Soil Removal
2005	RA:	LSAAP-009 Access Control Measures
	RA:	LSAAP-016 Soil Removal

# **Total IRP Funding**

Prior years (up to FY05): \$26,215,000
Current year funding (FY06): \$ 546,000
Future Requirements (FY07+): \$ 7,991,000
Total: \$34,752,000

# **Duration of IRP**

Year of IRP Inception: 1978 Year of IRP RIP/RC: 2006

Year of IRP Completion including LTM: Indefinite

# **IRP Contamination Assessment**

# IRP Contamination Assessment Overview

Past operations at LSAAP have resulted in the generation of metals and explosive-contaminated wastes in landfills and open burn/open detonation areas. Currently, there are 58 sites in AEDB-R. Restoration activities and/or long-term management are being performed at ten of these sites.

Low levels of metals and explosives have been found in the groundwater at several sites. Groundwater contamination is not likely to pose a significant risk off-site, due to local geology.

The results from sediment sampling at boundary locations, except for LSAAP-033, indicate no significant contamination is exiting the installation. Subsequent sampling showed no off-site contamination.

In July 1987, the Old Demolition Area (ODA LSAAP-017) was placed on the National Priorities List (NPL) because of metals and explosives contamination. A RI/FS was completed in 1997. The Record of Decision (ROD) was signed in August 1999, which specified a soil cover, erosion control measures and long-term monitoring. The soil cover action was completed in August 2002. USEPA declared LSAAP-017 Construction Complete on September 2002.

In 1993, LSAAP received a Notice of Violation (NOV) on the Area G Ponds (LSAAP-033). In March 1997, an Agreed Order with the state of Texas was signed which specified a surface water and sediment investigation, and long-term monitoring. In February 2001, a Compliance Plan was issued that requires LSAAP to conduct the corrective action and groundwater monitoring program in accordance with limitations, requirements, and other conditions set forth in the plan. The Compliance Plan was reissued on 25 April 2006.

As of November 2001, LSAAP has received TCEQ approval of closure reports for LSAAP-008, 015, 076, 077, 078, 079, 080, 101, 422, and 499E.

# IRP Cleanup Exit Strategy

The installation is scheduled to reach RIP/RC in FY06. This will require soil removal completion at LSAAP-006 and concurrence by TCEQ. An APAR for LSAAP-101 was submitted in early 2005, recommending no further action. The TCEQ gave approval and concurrence of the NFA recommendation on 8 June 2005. Specific details are contained within the individual site cleanup strategies and include:

- Continue long-term monitoring or RA(O) at LSAAP-002, 009, 017, 024, 033, and 034.
- Abandon wells at LSAAP-101

# LONE STAR ARMY AMMUNITION PLANT

Installation Restoration Program
Site Descriptions

# LSAAP-002 **INACTIVE WESTERN SANITARY LANDFILL**

# SITE DESCRIPTION

This 26-acre landfill, located on the western boundary of the installation, was used by Red River Army Depot (RRAD) for disposal of nonhazardous wastes from both RRAD and LSAAP from the mid-1940s until 1973. Groundwater sampling results indicate solvent contamination (1,2 DCE, TCE, vinyl chloride) is present.

TCEQ directed LSAAP to submit a Compliance Plan application. This application was submitted in June 1997 and approved in February 2001.

The RFI was completed in 1998. Phase II RFI sampling was completed in 2001 and results detected benzene and vinyl chloride above groundwater protection standards. Monitored natural attenuation (MNA), as CMI(O), began in 2001.

In FY04, one additional monitoring well was installed to verify results. Vinyl chloride at a

concentration of 8.8 µg/L was detected in the newly installed well. This concentration exceeds the protective concentration limit (PCL) of 2.0 µg/L for Vinyl Chloride.

In FY05, concentrations of Arsenic, DCE, Benzene and Vinyl Chloride were detected above the PCL in groundwater. Concentrations of TCE are decreasing while Vinyl Chloride is increasing indicating the MNA process is working.

# **STATUS**

REGULATORY DRIVER: RCRA

RRSE: High

CONTAMINANTS OF CONCERN:

**VOCs** 

**MEDIA OF CONCERN:** 

Groundwater

<u>Phases</u>	Start	<u>End</u>
RFA	197803	197807
CS	198803	199105
RFI	199911	200109
CMI(C)	200110	200408
CMI(O)	200110	203709

**RIP DATE: 200408** RC DATE: 203709

# **CLEANUP STRATEGY**

Groundwater monitoring and monitored natural attenuation, as required by the compliance plan, will continue. Conduct modeling based on the first five years of data from wells. At this time exact duration of remedial operations is unknown.

Installation-wide IDW costs are included under this site.

# LSAAP-006 BUILDING BB-15

# SITE DESCRIPTION

Buildings 1545 and 1548 were built in the 1940s and are located in the northwest section of LSAAP. The buildings housed a road wheel denuding process (removing rubber from wheels). Wheels and tracks from tanks were stripped of rubber and shot blasted at this site. All denuding operations at this site ceased in 1988.

This site was transferred from RRAD to LSAAP in March 1999.

The Phase I RFI indicated low levels of solvents in groundwater, and metals and PAHs (cadmium, chromium, lead) in surface soil. An IRA for soil removal from a ditch was completed in 1995. Phase II RFI sampling was completed in March 2001. A revised APAR suggesting additional soil removal was approved by TCEQ in Jun 2005.

# **STATUS**

REGULATORY DRIVER: RCRA

RRSE: Medium

**CONTAMINANTS OF CONCERN:** 

Metals

MEDIA OF CONCERN: Soil

<u>Phases</u>	Start	End
RFA	197803	197807
CS	198105	198105
RFI	200103	200503
IRA	199410	199509
CMI(C)	200508	200609

**RC DATE: 200609** 

# **CLEANUP STRATEGY**

1000 cy of soil will be removed from the site and disposed off-site (funded FY05). The four GW monitoring wells will be abandoned (funded FY05).

Submit a no further action report to TCEQ once action is complete (funded FY05).

# LSAAP-009 ABANDONED CONSTRUCTION LANDFILL

# SITE DESCRIPTION

This abandoned landfill, located south of the inactive and capped 1313 Landfill, has evidence of building demolition debris and buried drums containing construction materials. No documentation of the contents placed in this landfill exists.

The Phase I RFI was completed in June 1999. Sampling results indicate detection of TPH and PCBs. Phase II RFI samples were taken in March 2001. The RFI report was completed in March 2002, with the recommended action being deed recordation. None of the groundwater sample results had detections above the applicable cleanup standards. The soil results are as follows:

A soil sample of arsenic was detected at a concentration of 7.0 mg/kg at the 4-6 foot depth interval. The applicable cleanup standard for arsenic is 5.0 mg/kg.

**STATUS** 

**REGULATORY DRIVER: RCRA** 

RRSE: Low

**CONTAMINANTS OF CONCERN:** 

TPH, PCBs

MEDIA OF CONCERN: Soil

<u>Phases</u>	Start	End
RFA	197803	197807
CS	197803	197807
RFI	200103	200509
CMI(C)	200506	200509
LTM	201101	203701

**RC DATE: 200509** 

A soil sample of mercury was detected at a concentration of 0.05 mg/kg at the 28-30 foot depth interval. The applicable cleanup standard for mercury is 0.0078 mg/kg.

The road entrance was fenced to limit access to the site in Sep 2005.

A RAP was approved by TCEQ for site closure in Dec 2005. In FY05, a deed recordation was submitted and four groundwater monitoring wells were abandoned. The RACR was submitted in Jan 2006.

# **CLEANUP STRATEGY**

LUCs consisting of restricted access and deed recordation will be maintained indefinitely.

# LSAAP-016 HIGH EXPLOSIVES BURNING GROUND

# SITE DESCRIPTION

This site is located in the center of LSAAP. It has been used since the late 1940s to destroy by open burning articles contaminated with high explosives. In the mid-1970s, metal pans replaced four earthen pits previously used as burning areas. Although this site is active, the IRP will address the contamination (lead, mercury, chromium, selenium, nickel, and zinc) left from activities before the metal pans were installed.

In March 2001, Phase II samples were taken. Antimony was detected at a maximum concentration of 15 mg/kg at the surface. The applicable cleanup standard is 7.14 mg/kg. Cadmium was detected at a maximum concentration of 75 mg/kg at the surface. The applicable cleanup standard is 4.6 mg/kg. Lead was detected at a maximum concentration of 1000 mg/kg at the surface. The applicable cleanup standard is 270 mg/kg. Mercury was

# **STATUS**

**REGULATORY DRIVER: RCRA** 

RRSE: High

**CONTAMINANTS OF CONCERN:** 

Metals

MEDIA OF CONCERN:

Soil, Groundwater, Sediment

<u>Phases</u>	Start	<u>End</u>
RFA	197803	198507
CS	198508	198509
RFI	200006	200310
DES	200403	200406
CMI(C)	200408	200509
LTM	200509	200609

RC DATE: 200509

detected at a maximum concentration of 2.5 mg/kg at the surface. The applicable cleanup standard is 1.3 mg/kg. No groundwater constituents were detected above the applicable cleanup standards.

A revised APAR was submitted in Jul 2004. Lone Star and TCEQ are working through comments. Groundwater monitoring commenced in October 2004.

In FY05, a response action of soil removal was completed. A RACR was submitted to TCEQ in Oct 2005.

# **CLEANUP STRATEGY**

Long-term groundwater monitoring will continue in accordance with the requirements of the compliance plan. After FY06, additional monitoring required by the compliance plan will be for the active activities and therefore, covered with non-ER,A funds. Continued monitoring after FY06 is due to ongoing activities and not past releases.

# LSAAP-017 OLD DEMOLITION AREA

# SITE DESCRIPTION

This site is on the National Priorities List (NPL). All corrective actions are covered under an Interagency Agreement (IAG). The Old Demolition Area (ODA) covers approximately 17.4 acres in the south-central portion of LSAAP. The ODA was used from 1943-1944 for the disposal of various munitions (grenades, fuses, and bombs) by detonation.

This site was placed on the NPL because of metals and explosives (nitroglycerin, PETN) contamination. A RI/FS was completed in May 1998. The Record of Decision (ROD) was signed in August 1999, which specified a soil cover, erosion control measures and long-term monitoring to address nitroglycerin contamination in the soil and groundwater. The soil cover and erosion control remedial action was completed in August 2002.

In FY04, the final closeout report was submitted to the EPA to petition for NPL deletion.

The Five-Year Review was initiated in Feb 2006.

# **STATUS**

**REGULATORY DRIVER: CERCLA** 

RRSE: Medium

**CONTAMINANTS OF CONCERN:** 

Explosives, Metals

**MEDIA OF CONCERN:** 

Groundwater, Soil

<u>Phases</u>	Start	End
PA	197803	197807
SI	197803	197807
RI	198709	199709
RD	200006	200101
RA(C)	200106	200208
LTM	200302	203709

**RC DATE: 200302** 

# **CLEANUP STRATEGY**

Annual groundwater monitoring will continue indefinitely. Long-term management of LUCs will consist of five-year reviews, deed restrictions and cap maintenance and will continue indefinitely.

# LSAAP-020 RDX AND TNT SUMPS AND TANKS

# SITE DESCRIPTION

Several RDX and TNT concrete sumps and tanks exist at LSAAP. Most were constructed during the 1940s. The units were used for the collection, treatment and/or transfer of pinkwater (water contaminated with explosives). There are also several steel units. These units provide preliminary removal of pinkwater from the wastewater. The wastewater was then transported to the pinkwater treatment plants via the industrial sewer.

RFI samples were taken in March 2001; explosives were detected above action levels.

A revised APAR was approved in Feb 2004, which recommended soil removal.

In FY04, 182 cy of soil was removed from the site. Due to an increased area of contamination, more soil removal is required.

# STATUS

**REGULATORY DRIVER: RCRA** 

RRSE: Low

**CONTAMINANTS:** Metals,

**Explosives** 

**MEDIA OF CONCERN: Soil** 

<u>Phases</u>	Start	End
RFA	197803	197807
CS	199609	199708
RFI	200102	200303
DES	200307	200403
CMI(C)	200404	200409
CMI(O)	200404	200509

RIP DATE: 200409 RC DATE: 200509

A Self-Implementation Notice was approved in Mar 2004.

An additional 88 cy of soil was removed in FY05.

# **CLEANUP STRATEGY**

A Response Action Completion Report will be submitted to TCEQ.

# LSAAP-024 ABANDONED LANDFILL (NEAR AREA W)

# SITE DESCRIPTION

This landfill covers approximately five acres near Area W. It is located on both sides of a nearby road. The site is filled with construction debris, soil, and steel drainage piping from the demolition of a Plumbing Shop and a Chemistry Laboratory at RRAD.

Phase I sampling results indicated that the groundwater was contaminated with VOCs and arsenic. Phase II samples were taken in March 2001. Results indicated no detections of COCs above GWPS. An APAR was submitted in May 2002 recommending no further action.

Sampling events in 2004 and 2005 revealed no COCs above GWPS.

A RAP was approved by TCEQ in Dec 2005.

# **STATUS**

**REGULATORY DRIVER: RCRA** 

RRSE: Medium

CONTAMINANTS OF CONCERN:

VOCs, Arsenic

**MEDIA OF CONCERN:** 

Groundwater

<u>Phases</u>	Start	<u>End</u>
RFA	197803	197807
CS	197803	197807
RFI	200103	200309
LTM	200404	203709

**RC DATE: 200309** 

# **CLEANUP STRATEGY**

In FY06, abandon wells, submit deed recordation and fence and post signs at the site. Submit a Response Action Completion report to TCEQ. Maintain LUC indefinitely.

# LSAAP-033 AREA G PONDS

# SITE DESCRIPTION

Between 1942 and 1972, the site was used to hold spent sulfuric acid, chromic acids, nitric acids, sodium hydroxide, and rinse water. The underground piping transported acidic wastewaters from the Area G production lines to the Area G Ponds. The ponds' wastewater was treated with sodium hydrogen sulfite and sodium hydroxide to precipitate metals. The liquid above the precipitated metals was discharged into a drainage channel.

As an IRA, the Area G Ponds were capped and closed in accordance with a TCEQ approved closure plan in October 1983. The TCEQ requested that these units be reinvestigated because the unit was closed with sludge in place.

The RFI/APAR report was submitted to TCEQ in July 2001. A RAP was submitted in Jan 2002. Hot spot soil removal was completed in 2002. Long term monitoring began in April 2003.

# **STATUS**

REGULATORY DRIVER: RCRA

RRSE: Medium

**CONTAMINANTS OF CONCERN:** 

Chromium

**MEDIA OF CONCERN:** 

Groundwater, Soil, Sediments, Surface Water

<b>Phases</b>	Start	End
RFA	197803	197807
CS	197803	197807
RFI	199906	200011
DES	200104	200112
IRA	198209	198310
CMI(C)	200204	200211
LTM	200304	202309

**RC DATE: 200212** 

A Draft Tier II Area Eco Risk Assessment was completed. TCEQ submitted comments to LSAAP in Dec 2004.

# **CLEANUP STRATEGY**

Continue semi-annual groundwater monitoring and annual reporting until 2023. Continue cap maintenance indefinitely (funded under AEDB-R site LSAAP-002). Abandon unused wells in FY06 and remaining wells in 2023.

# LSAAP-034 AREA O PONDS (SWMUS 034, 035)

# SITE DESCRIPTION

From 1942 to 1978, the seven Area O Ponds (6.1 acres total surface area) were used to treat pinkwater discharges consisting of explosive residues (HMX, RDX, 2,6-TNT) and wash down water. As an IRA, the ponds were closed under a TCEQ and USEPA approved closure plan in December 1982. The unit was closed and capped as a landfill, with sludge in place.

In February 2001, the Compliance Plan was issued and called for groundwater monitoring. Groundwater contamination detections were below action levels.

# **CLEANUP STRATEGY**

Continue groundwater monitoring until 2022. Continue cap maintenance (funded under AEDB-R site LSAAP-002). Abandon three wells in FY06.

# **STATUS**

**REGULATORY DRIVER: RCRA** 

RRSE: Low

**CONTAMINANTS OF CONCERN:** 

**Explosives** 

**MEDIA OF CONCERN:** 

Groundwater

<u>Phases</u>	<u>Start</u>	<u>End</u>
RFA	197803	197807
CS	197803	197807
RFI	199608	199909
IRA	198201	198212
LTM	199909	202209

RC: 199909

# SITE DESCRIPTION

The Road Oil Burial (ROB) -1 monitoring well is a background well that was installed as a part of the LSAAP-015 investigation. Elevated metals in ROB-1 samples were determined to be unrelated to the LSAAP-015 site investigation. These elevated metals require investigation.

Results from the first GW sampling event in May 2004 are as follows:

Manganese was detected in the newly installed well (ROB-1) at a concentration of 1390 ug/L exceeding the cleanup standard of 1100 ug/L. Manganese was also detected in well ROB-5 at a concentration of 2170 ug/L.

An arsenic surface soil sample had a concentration of 32.5 ug/g exceeding the cleanup standard of 24.2 ug/g.

# **STATUS**

**REGULATORY DRIVER: RCRA** 

RRSE: Medium

**CONTAMINANTS OF CONCERN:** 

Metals

**MEDIA OF CONCERN:** 

Groundwater

<u>Phases</u>	Start	<u>End</u>
RFA	200112	200204
CS	200112	200204
RFI	200404	200506
LTM	200610	200801

**RC DATE: 200506** 

Two more sampling events were completed in July and September 2004, and one well was installed.

The APAR recommending NFA was approved in Jun 2005.

# **CLEANUP STRATEGY**

Abandon seven wells as soon as funds are available.

**IRP No Further Action Sites Summary** 

	IIII III	dither Action Oites our	
AEDB-R#	Site Title	Documentation/Reason for NFA	NFA Date
LSAAP-003	Eastern Active Landfill	Not Eligible For ER,A/BRAC Funding	199702
LSAAP-004	Eastern Inactive Landfill	Study Completed, No Cleanup Required	200112
LSAAP-005	Paint Filter Site	All Required Cleanup(s) Completed	200011
LSAAP-008	Abandoned Landfill 2	Study Completed, No Cleanup Required	200212
LSAAP-009	Abandoned Construction Landfill	All Required Cleanup(s) Completed	200509
LSAAP-010	Abandoned Landfill (SWMU 010)	Study Completed, No Cleanup Required	197807
LSAAP-011	Abandoned Landfill (SWMU 011)	Study Completed, No Cleanup Required	199208
LSAAP-012	Abandoned Landfill (SWMU 012)	Study Completed, No Cleanup Required	199208
LSAAP-013	Abandoned Landfill (SWMU 013)	Study Completed, No Cleanup Required	199208
LSAAP-014	Abandoned Landfill (SWMU 014)	Study Completed, No Cleanup Required	199208
LSAAP-015	Road Oil Burial Site	All Required Cleanup(s) Completed	200206
LSAAP-016	High Explosives Burning Ground	All Required Cleanup(s) Completed	200509
LSAAP-018	High Explosives Demolition Ground	Not Eligible For ER,A/BRAC Funding	200403
LSAAP-019	Creeks, Stream Highs, Drainage	Study Completed, No Cleanup Required	197807
LSAAP-020	RDX & TNT Sumps & Tanks	All Required Cleanup(s) Completed	200409
LSAAP-022	Container Storage Area T-4-2	Not Eligible For ER,A/BRAC Funding	199208
LSAAP-023	Chemical Burial Site	Study Completed, No Cleanup Required	199208
LSAAP-027	Container Storage Area T-3-2	Not Eligible For ER,A/BRAC Funding	199208
LSAAP-028	Container Storage Area T-2-1	Not Eligible For ER,A/BRAC Funding	199208
LSAAP-029	Container Storage Area P-78	All Required Cleanup(s) Completed	198812
LSAAP-031	Salvage Yard	Not Eligible For ER,A/BRAC Funding	199208
LSAAP-035	RR Classification Yard	Study Completed, No Cleanup Required	199204
LSAAP-037	Chrome Plating Area	Study Completed, No Cleanup Required	199208
LSAAP-038	Area W Wells	Study Completed, No Cleanup Required	20011

AEDB-R#	Site Title	Documentation/Reason for NFA	NFA Date
LSAAP-039	Bulk Fuel Storage Area	All Required Cleanup(s) Completed	199603
LSAAP-040	Container Storage Area A-8	Not Eligible For ER,A/BRAC Funding	199208
LSAAP-044	Wells & Cistern	Study Completed, No Cleanup Required	199208
LSAAP-045	Cistern VII (SWMU 045)	All Required Cleanup(s) Completed	200009
LSAAP-046	Cistern II (SWMU 046)	All Required Cleanup(s) Completed	200009
LSAAP-047	Cistern III (SWMU 047)	All Required Cleanup(s) Completed	200009
LSAAP-048	Cistern IV (SWMU 048)	All Required Cleanup(s) Completed	200009
LSAAP-053	Cistern VI (SWMU 053)	All Required Cleanup(s) Completed	200009
LSAAP-054	Cistern VIII (SWMU 054)	All Required Cleanup(s) Completed	200009
LSAAP-055	XX Test Area	Not Eligible For ER,A/BRAC Funding	200309
LSAAP-067	RDX Pit B-46	Study Completed, No Cleanup Required	199208
LSAAP-073	RDX Pit K-2	All Required Cleanup(s) Completed	200008
LSAAP-075	K-15 South and North	Not Eligible For ER,A/BRAC Funding	200112
LSAAP-076	Landfill Near Area W Two	Study Completed, No Cleanup Required	200206
LSAAP-077	Landfill Near Area W Three	Study Completed, No Cleanup Required	200206
LSAAP-078	Area Behind Bldg F-7	Study Completed, No Cleanup Required	200405
LSAAP-079	Area Behind Bldg F-11	Study Completed, No Cleanup Required	200405
LSAAP-080	Area Behind Bldg F-13	Study Completed, No Cleanup Required	200405
LSAAP-100	P-29 Area	Other	200208
LSAAP-201	RDX Pits, Settling Pits & WW Sumps	Study Completed, No Cleanup Required	200109
LSAAP-422	B-8 Battery Washdown Sump	Study Completed, No Cleanup Required	200206
LSAAP-498	Sanitary Sewer System	Study Completed, No Cleanup Required	199209
LSAAP- 499A	Pinkwater Treatment Facs & Aux Equip	Not Eligible For ER,A/BRAC Funding	199707
LSAAP- 499C	Lead Wst Wtr Trtmnt Fac P -78 & Aux Equip	Not Eligible For ER,A/BRAC Funding	199702
LSAAP- 499D	Chrome Wst Wtr Trtmnt Fac G130 & Aux Equip	Not Eligible For ER,A/BRAC Funding	199702
LSAAP- 499E	Indust Sewer Lift Station P-78+Pipes	Not Eligible For ER,A/BRAC Funding	200109

# Initiation of IRP: 1978

# Past Phase Completion Milestones

Installation Assessment, Jul 78

# 1981-1983

- PA/SI, Sep 81
- IRA Area O Ponds closed, Dec 82
- IRA Area G Ponds closed, Oct 83

## 1991

RI/FS Phase I, Dec

## 1992

- RI/FS Draft, Phase II, Jun
- RA USTs removed at LSAAP-039, May

# 1993

RI/FS - Draft-Final, Phase III, Feb

## 1995

• IRA - Building BB-15, Sep

# 1997

- RI/Risk Assessment Completion, Mar
- Feasibility Study Completion, Dec

# 1998

- Proposed Plan, Apr
- RA Complete for removal at LSAAP-046, 047, 048, 053, 054, Sep

# 1999

ROD signed, Aug

## 2002

- RA Soil cover at LSAAP-017, Aug
- NPL Construction Complete, Aug
- RA Soil excavation at LSAAP-033, Sep

# 2004

- RD Soil excavation at LSAAP-020, Sep
- RA Soil excavation at LSAAP-020, Sep

# 2005

RI – Completed investigation at LSAAP-101, Jun

# IRP Schedule

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates: NA

Projected Construction Completion Date of IRP: 2006

Projected Date for Deletion from NPL: 2006

Schedule for Next Five-Year Review: 2011

Estimated Completion Date of IRP (including LTM phase): Indefinite

# Lone Star AAP IRP Schedule

(Based on required funding)

AEDB-R#	Phase	FY07	FY08	FY09	FY09	FY10	FY11	FY12	FY13	FY14	FY15+
LSAAP-002	CMI(O)										203709
LSAAP-009	LTM										203709
LSAAP-017	LTM										203709
LSAAP-024	LTM										203709
LSAAP-033	LTM										202309
LSAAP-034	LTM										202209
LSAAP-101	LTM			·		·				·	



# Prior Year Funds for IRP, MMRP, and Closure-Related Compliance

**Funding up to FY04: \$25,557K** 

Year	Site Information	Expenditures	<b>FY Total</b>
FY05	CMI(O) at LSAAP-002	21.3K	
	CMI(C) at LSAAP-006	259.1K	
	RI at LSAAP-009	11.4K	
	CMI(C) at LSAAP-009	37.1K	
	LTM at LSAAP-016	161.8K	
	RI at LSAAP-017	2K	
	CMI(O) at LSAAP-020	107.7K	
	LTM at LSAAP-024	2.7K	
	LTM at LSAAP-033	22.4K	
	LTM at LSAAP-034	17.9K	
	RI at LSAAP-101	14.5K	\$658K

**Total Prior Year Funds: \$26,215K** 

# Current Year Requirements for IRP, MMRP, and Closure-Related Compliance (from BRAC workplan)

Year	Site Information	Requirements	FY Total
FY06	CMI(O) at LSAAP-002	156.3K	
	CMI(C) at LSAAP-006	15K	
	LTM at LSAAP-016	75.8K	
	LTM at LSAAP-017	44.4K	
	LTM at LSAAP-024	78.3K	
	LTM at LSAAP-033	109.4K	
	LTM at LSAAP-034	66.4K	\$546K

**Total Requirements FY06: \$546K** 

Total Future Requirements: \$7,991K

Total Program Cost (from inception to completion of the IRP): \$34,752K

# Community Involvement

In November 1997, Lone Star Army Ammunition Plant (LSAAP) canvassed the surrounding communities for potential interest in establishing a RAB.

In an effort to determine public interest in establishing a RAB, LSAAP placed advertisements each Friday over a 30-day period in the daily Texarkana Gazette, and each Sunday in the weekly Citizens Tribune.

There were three responses to the paid advertisements in the community newspapers. They were from an environmental consultant, an employee on LSAAP's operating contractor's environmental staff, and a private citizen. Based on the results of LSAAP's efforts to determine interest in forming a RAB, it was determined that there was not enough interest to establish a RAB at that time.

In April 2001, LSAAP canvassed the community again to seek interest in establishing a RAB. With only six respondents, it was determined that there was not enough interest to establish a RAB.

The Community Relations Plan was published in 2005.